

WHAT is CLAIMED.

1). A machine for continuous-cycle shearing of moving welded tubes, comprising:

a conveyor system for continuously supplying a tube at a constant velocity and in a longitudinal direction of the tube;

a cutting slide which bears shearing devices predisposed to section the tube transversally and in successive tracts thereof;

means for activating which impose a linear alternating motion on the cutting slide without pausing, between an initial position and a final position along a parallel direction with respect to the longitudinal direction of transport of the tube; the linear alternating motion comprises an outward run, from the initial position to the final position, at least a tract of which occurs in synchrony with an advancement of the tube and during which the tube is sectioned, and a return run, following which the cutting slide is brought back into the initial position; both the outward run and the return run comprise an acceleration tract, a constant velocity tract and a deceleration tract;

wherein the means for activating impose on the cutting slide an alternating linear motion with no pauses following a law of motion in which acceleration is a derivable function.

2). The machine of claim 1, wherein the law of motion imposed on the cutting slide, the derived acceleration function progresses continuously over time.

3). The machine of claim 1, wherein the law of motion imposed on the cutting slide includes a velocity profile in which passages from the acceleration tract

to the constant-velocity tract and passages from the constant-velocity tract to the deceleration tract occur with sinusoidal curves of connection.

4). The machine of claim 1, wherein the law of motion imposed on the cutting slide includes a velocity profile in which passages from the acceleration tract to the constant-velocity tract and passages from the constant-velocity tract to the deceleration tract occur in seventh-degree polynomial curves of connection.